

Assignment -2
Internet of Things

Assignment Date	27September 2022
Student Name	S.Gulnas Fathima
Student Roll Number	912619104009
Maximum Marks	2 Marks

Question-1:

Build a python code, assume you get temperature and humidity values (generated with random function to a variable) and write a condition to continuously detect alarm in case of high temperature.

Solution:

```
import random
import time
while True:
    temperature = random.randint(-15,100)
    humidity = random.randint(1,100)
    print(f"Checking Temperature: {temperature}"u'\N{DEGREE SIGN}""C");
    print(f"Checking Humidity: {humidity}%");
    f = (temperature * 1.8 ) +32
    print("Temperature in Fahreheit is:",f)

#Humidity Measurement

if humidity >= 100:
    print(f"{humidity}% it is a Humid humudity level")
elif 65<humidity<100 :
    print(f"{humidity}% it is a Prefect humudity level")
else :
    print(f"{humidity}% it is a Dry humudity level")

#Temperature Measurement

if temperature >=37:
    print(f"{temperature}"u'\N{DEGREE SIGN}""C is a Hot Temperature\n Alarm is activated \n
Notification is Notified")
elif temperature==37:
    print(f"{temperature}"u'\N{DEGREE SIGN}""C is a Normal Temperature")
else:
    print(f"{temperature}"u'\N{DEGREE SIGN}""C is a Cold Temperature")
print(' Humidity level & Temperature level is Monitored and Saved.\n')
time.sleep(5)
```

Output:

```
tem@hum.py - C:\Users\jalban\AppData\Local\Programs\Python\Python310\tem@hum.py (3.10.7)
File Edit Format Run Options Window Help

import random
import time
while True:
    temperature = random.randint(-15,100)
    humidity = random.randint(1,100)
    print(f"Checking Temperature: {temperature}" + "\n(DEGREE SIGN)" + "°C");
    print(f"Checking Humidity: {humidity}%");
    f = (temperature * 1.8 ) +32
    print("Temperature in Fahreheit is:",f)

    #Humidity Measurement
    if humidity >= 100:
        print(f"{humidity}% it is a Humid humidity level")
    elif 65<humidity<100 :
        print(f"{humidity}% it is a Prefect humidity level")
    else :
        print(f"{humidity}% it is a Dry humidity level")

    #Temperature Measurement
    if temperature >=37:
        print(f"{temperature}" + "\n(DEGREE SIGN)" + "°C is a Hot Temperature\n Alarm is activated \n Notification is Notified")
    elif temperature==37:
        print(f"{temperature}" + "\n(DEGREE SIGN)" + "°C is a Normal Temperature")
    else:
        print(f"{temperature}" + "\n(DEGREE SIGN)" + "°C is a Cold Temperature")
    print(' Humidity level & Temperature level is Monitored and Saved.\n')
    time.sleep(5)

Ln: 24 Col: 22
```

```
tem@hum.py - C:\Users\jalban\AppData\Local\Programs\Python\Python310\tem@hum.py (3.10.7)
File Edit Format Run Options Window Help

import random
import time
while True:
    temperature = random.randint(-15,100)
    humidity = random.randint(1,100)
    print(f"Checking Temperature: {temperature}" + "\n(DEGREE SIGN)" + "°C");
    print(f"Checking Humidity: {humidity}%");
    f = (temperature * 1.8 ) +32
    print("Temperature in Fahreheit is:",f)

    #Humidity Measurement
    if humidity >= 100:
        print(f"{humidity}% it is a Humid humidity level")
    elif 65<humidity<100 :
        print(f"{humidity}% it is a Prefect humidity level")
    else :
        print(f"{humidity}% it is a Dry humidity level")

    #Temperature Measurement
    if temperature >=37:
        print(f"{temperature}" + "\n(DEGREE SIGN)" + "°C is a Hot Temperature\n Alarm is activated \n Notification is Notified")
    elif temperature==37:
        print(f"{temperature}" + "\n(DEGREE SIGN)" + "°C is a Normal Temperature")
    else:
        print(f"{temperature}" + "\n(DEGREE SIGN)" + "°C is a Cold Temperature")
    print(' Humidity level & Temperature level is Monitored and Saved.\n')
    time.sleep(5)

IDLE Shell 3.10.7
>>>
== RESTART: C:\Users\jalban\AppData\Local\Programs\Python\Python310\tem@hum.py ==
Checking Temperature: 19°C
Checking Humidity: 80%
Temperature in Fahreheit is: 66.2
88% it is a Prefect humidity level
Checking Temperature: 62°C
Checking Humidity: 51%
Temperature in Fahreheit is: 143.60000000000002
51% it is a Dry humidity level
62°C is a Hot Temperature
Alarm is activated
Notification is Notified
Checking Temperature: 91°C
Checking Humidity: 65%
Temperature in Fahreheit is: 195.8
65% it is a Dry humidity level
91°C is a Hot Temperature
Alarm is activated
Notification is Notified
Checking Temperature: 16°C
Checking Humidity: 44%
Temperature in Fahreheit is: 60.8
44% it is a Dry humidity level
Checking Temperature: -1°C
Checking Humidity: 72%
Temperature in Fahreheit is: 30.2
72% it is a Prefect humidity level
Checking Temperature: 87°C
Checking Humidity: 65%
Temperature in Fahreheit is: 188.6
65% it is a Dry humidity level
87°C is a Hot Temperature
Alarm is activated
Notification is Notified
Checking Temperature: 70°C
Checking Humidity: 69%
Temperature in Fahreheit is: 158.0
69% it is a Prefect humidity level

Ln: 25 Col: 2
```